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SAN FRANCISCO WATER DEPARTMENT'S PROGRAM TO EXTEND WATER SUPPLIES.

WATER WAYS!

The San Francisco Board of Supervisors has requested the San Francisco Water Department to investigate alternative measures for supplementing and extending water supplies for San Francisco, San Mateo, Santa Clara, and Alameda Counties. The San Francisco Water Department, in cooperation with local water districts, has begun a study to examine the feasibility of increasing conservation programs, wastewater reclamation, and local groundwater supplies to help conserve and extend existing supplies. The first step of this examination is an assessment of public issues, preferences, and concerns about implementing these types of programs. Your comments and suggestions at two public meetings in San Francisco can help shape the future of your water supply.

Mark Your Calendars

Tuesday, October 16, 1990 7:00 PM
Public Health Hearing Room
101 Grove Street
San Francisco

Tuesday, December 4, 1990 7:00 PM
A.P. Giannini Middle School
3151 Ortega
San Francisco (Sunset District)

San Francisco's Water Supply

The San Francisco Bay Area enjoys one of the highest quality water supplies in California. Since the 1850's, San Francisco has developed one of the most effective and efficient water supply systems in the state. Clear mountain water from melting snowpack high in the Sierra Nevada Mountains is stored in reservoirs and delivered to the San Francisco area. The high Sierra provides an average of 80 percent of the San Francisco Water Department water. The remainder is supplied by surface water stored in Water Department reservoirs in San Mateo, Santa Clara, and Alameda Counties.

Increasing population and economic growth are putting increasing pressure on our water supplies. Reduced snowfall in the last few years has reminded us of the limitations on water resources in California. Although recent drought restrictions have slowed the growth in water use, long term reliability of water supplies depends on better management of our existing supplies.

The San Francisco Water Department distributes water in San Francisco and to 30 local water agencies in San Mateo, Santa Clara, and Alameda Counties. Two-thirds of the San Francisco Water Department water is distributed to these 30 suburban water agencies. The suburban districts supplement the Water Department supply with water from local reservoirs, groundwater and other water agencies.

Some of the existing conservation, reclamation, and groundwater programs in San Francisco are described inside. Some concepts for future programs to extend our supplies are also presented. All of the programs will affect your daily life. They could mean more efficient plumbing and irrigation equipment for your home or work, better irrigation of city parks, and increased reliability of fire protection or drought supplies. Future programs could also mean changes in your water use habits, changes in the quality of water you use, construction impacts in your neighborhood, or increases in your water bills.

The San Francisco Water Department is eager to hear your comments, suggestions, preferences, and concerns. Please attend one of the meetings in San Francisco listed here and on page 4.

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Conservation

Numerous types of conservation programs and approaches could be used to extend water supplies by reducing use. These approaches can vary greatly in cost and effectiveness. Conservation programs can include:

Education Programs—One of the most common approaches to conservation is to provide broad public education about water use and resources. Increased awareness of water waste can change water use habits.

Technical Assistance—Conservation of water resources can be achieved by providing technical assistance to increase water efficiency in industrial processes. Assistance and training can also be provided to homeowners, landscapers, architects, contractors, and others to encourage the use of more efficient design and construction.

Structural Changes—Replacing older equipment and fixtures with new, water-efficient equipment can also reduce water use. For example, toilet fixtures can be replaced with low flow toilets. Industrial processes can also be improved through similar retro-fit programs.

Regulations and Enforcement—Water conservation can also be achieved by establishing and enforcing requirements for water use reductions. Some examples of types of requirements include limiting irrigation times, limiting household water use, or requiring installation of water-saving plumbing fixtures. San Francisco is currently considering two local ordinances to limit irrigation in large development landscapes and to require the installation of ultra-low flow toilets in new or completely renovated buildings.

Questions

- Are you willing to change your personal water use habits to preserve long-term water supplies? How much water do you believe you can save?
- Will financial incentives to make plumbing improvements encourage you to conserve?
- Are you willing to change your landscaping to conserve water?
- Should an increasing water rate schedule be used to encourage water conservation? Should large users of water pay more per gallon of water?
- What is the best way to advertise the need to conserve? Utility bills? Billboards? Television? Newspapers?
- Does your awareness of the drought affect your efforts to conserve?
- How could the Water Department encourage conservation when there is not a drought?
- How can we pay for these programs? Are you willing to pay more for your water to encourage conservation?
- Should the Water Department help pay for residential water conservation?

Extending Water Supplies: Water conser use can provide for more efficient use Water Department is eager to hear you questions presented below.

Groundwater

The San Francisco Water Department has initiated a three part program to examine possible groundwater uses, the quantity of groundwater available in San Francisco, and the quality of the water.

Groundwater Uses—Groundwater can be used to supplement existing drinking water supplies or to replace non-drinking water uses such as irrigation and fire protection. In some areas, groundwater basins may be used as natural storage reservoirs for water supplies. This approach, called conjunctive use, stores available surface water or reclaimed water underground for use at a later time.

Groundwater Quantity—The San Francisco Water Department in consultation with the U.S. Geological Survey will further investigate the availability of groundwater supplies by drilling monitoring wells, conducting pumping tests, and mapping resources. If groundwater use is expanded, continued monitoring would be necessary to prevent overusing the groundwater supply, which can lead to sinking land (subsidence) or seawater being drawn into the groundwater (seawater intrusion).

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s about the water program options and

Groundwater Quality—Groundwater supplies must meet strict drinking water quality standards. Groundwater supplies are potentially affected by contamination seeping into the ground from surface activities such as septic systems, industrial sites, landfills, and storage tanks. The taste of groundwater supplies may also be affected by the presence of natural minerals and dissolved solids. Careful testing of any potential groundwater use will be required. If groundwater is used for irrigation or other non-consumptive uses, quality standards are not as restrictive.

Questions

- Sometimes wells are abandoned when surface water becomes cheaper or easier to use. Do you know of groundwater wells that might be reopened?
- Storing water in groundwater basins may be a way to provide reliability to the system. How do you feel about storing imported water or reclaimed water in groundwater basins?
- Should the San Francisco Water Department provide incentives to businesses to use groundwater for their processes?

Reclamation

The San Francisco Water Department and the San Francisco Clean Water Program have initiated a program to examine the cost, feasibility, and acceptability of providing additional wastewater treatment, constructing new distribution pipelines, and using highly-treated wastewater to replace some non-consumptive water uses. The types of uses being considered include:

Low Contact Irrigation—Reclaimed water may be used to irrigate areas where there is low likelihood of physical contact with the irrigation water. These possible areas include freeway landscaping and cemeteries.

High Contact Irrigation—With higher levels of treatment, reclaimed water can be safely used to irrigate areas where there is a higher likelihood of contact. These potential areas include landscape irrigation on golf courses, boulevard medians, school yards and playing fields, and parks such as Golden Gate Park and the San Francisco Zoo.

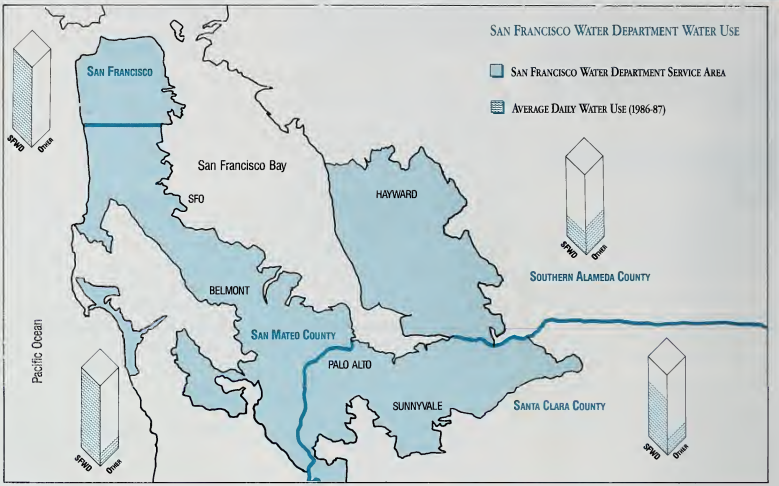
Lakes and Ponds—San Francisco is also examining the possibility of using reclaimed water to supply recreational and decorative lakes and ponds where no swimming is allowed.

Industrial and Commercial Uses—Reclaimed water can also be used for some industrial and commercial processes such as truck and bus washing and industrial cooling.

Groundwater Recharge—San Francisco is also examining the feasibility and acceptability of using reclaimed water to replenish groundwater supplies. Reclaimed water would be spread in basins and allowed to seep into the ground. The filtering action of the soil provides even higher levels of treatment.

Questions

- How do you feel about using reclaimed wastewater to reduce use of existing water supplies? What uses do you prefer?
- What are other possible uses of reclaimed water?
- Assuming that state and federal treatment and health standards are met, should reclaimed water be used for irrigation? What are acceptable areas for irrigation with reclaimed water? What are unacceptable areas?
- How do you feel about using reclaimed water for groundwater recharge? Should it be used only to prevent seawater intrusion?
- Assuming that groundwater recharged with reclaimed water meets state and federal drinking water standards, should it be used for drinking water supply? Should its use be limited to non-drinking water uses?
- How would you prioritize conservation, groundwater use, and reclamation? Which do you believe to be most acceptable and most feasible?



Public meetings

The San Francisco Water Department is holding eight public meetings in the Bay Area to hear from interested groups and individuals about community preferences, suggestions, and concerns about conservation programs, wastewater reclamation, and groundwater use. Please attend either of the meetings in San Francisco and provide your comments and responses to the issues presented here. You may also submit comments and responses in writing to the address below. The meetings will be held at the following places and times:

Tuesday, October 16, 1990 **7:00 PM**
Public Health Hearing Room
101 Grove Street San Francisco

Tuesday, December 4, 1990 **7:00 PM**
A.P. Giannini Middle School
3151 Ortega San Francisco (Sunset District)

Two meetings in each of San Mateo, Santa Clara, and Alameda Counties will also be held. For more information about these meetings, please write or call the San Francisco Water Department, 425 Mason Street, San Francisco, CA 94102, (415) 923-2467.

San Francisco Water Department
425 Mason Street
San Francisco, CA 94102

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Inside:

Important meetings about your future water supply.

Water Ways! is provided as a public service by the San Francisco Water Department in cooperation with local water agencies, CH2M HILL and Public Affairs Management.

SF PHOTO LAB RECYCLES WATER

Best Photo Labs, a custom photo processing lab, has installed a revolutionary water recycling system, that reuses 85% of the water the lab needs to develop photographs.

Using the new process, the same water is used several times to rinse chemicals from both film and paper that is being developed into pictures. Eamon Kennedy, owner of Best Photo Labs, estimates that before he installed the water reclamation system, his

Photo: Carmen Magana

Eamon Kennedy, owner of Best Photo Labs, with his water recycling system.

six processors were using 4000 gallons a day. Now, the amount of water going down the drain has been reduced to about 800 gallons a day and is purer than tap water. Kennedy expects to save 1.5 million gallons over this first year of water recycling. The recycling equipment saves energy to heat the water and also removes most of the silver and developing chemicals for reprocessing and recovery.

REsys, Inc. of Salem, Oregon, the company that installed the equipment, provides recycling equipment for the photo processing and electronics industry. Electronics companies have previously used hydrofluorocarbons, damagers of the ozone layer, for cleaning circuit boards. A movement now exists in the electronics industry to use water as a cleaner in an effort to reduce hydrofluorocarbon pollution.

Eamon Kennedy, a member of the Small Business

Continued on back panel

***WEATHER STATION** Continued*

called "evapotranspiration." Such information helps growers determine how much water specific plants need, enabling them to keep irrigation at a minimum to avoid water waste.

The Crystal Springs CIMIS station is unique because it is the only one located in a foggy coastal area. It will be of particular help to coastal growers, San Francisco gardeners and the City's Recreation and Park Department in determining watering needs.

In Denver and Fresno, evapotranspiration rates are publicized daily by local TV weather forecasters and/or in the newspaper. The SF Water Department hopes that local evapotranspiration rates determined by the new Crystal Springs weather station will be similarly publicized in San Francisco.

***PHOTO LAB RECYCLES** Continued*

Commission's Green Ribbon Panel, said, "We installed the system because we decided to get off the sidelines and into the environmental movement. We felt it was hypocritical to be a part of the arts community that supports environmentalism, then go to work every day and pollute and waste water."

For information, on the REsys recycling equipment, call Nelson Maheu at (503) 588-8786. "WaterWays" will showcase innovators and pioneers in water conservation in each issue. Please call Franz Hansell at 923-2470 if you know of any super water savers.

CREDITS

WATERWAYS is published by the San Francisco Water Department. Comments and suggestions may be sent to:

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SAN FRANCISCO WATER DEPARTMENT
WATERWAYS
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CIMIS WEATHER STATION INSTALLED FOR SF

In November, a CIMIS weather station, located at Crystal Springs Reservoir in San Mateo County, went on line for the SF Water Department to provide up-to-the-minute irrigation information to the San Francisco Bay Area.

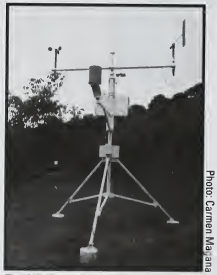

Photo: Carmen Magana

The CIMIS weather station.

CIMIS stands for the California Irrigation Management Information System, managed by the Department of Water Resources. It consists of a network of approximately 100 microcomputerized weather stations throughout California and a central computer located at the University of California at Davis. Each weather station automatically reads and collects information from attached weather sensors, which measure wind speed, air temperature, humidity, precipitation and solar radiation hourly. The main computer at Davis collects the information from each station over telephone lines and estimates how much water is in the soil of irrigated areas at each station site. This is

Continued on back panel

DEAR WATER USER

As we enter 1991, the rains have still not come and we face an unprecedented fifth year of drought. Even if we had a deluge tomorrow, water levels would remain at an all-time low. Water-wise use of this precious resource is here to stay and will require extra efforts on all our parts. If and when "normal" rainfall returns, we hope that this drought experience will have taught us that we should never waste water, even in years of abundance, because the threat of water shortages in California is ever present.

Photo: Carmen Magano

John Mullane

This second issue of "WaterWays", our new quarterly newsletter, tells you about the extra water conservation effort that Eamon Kennedy, owner of Best Photo Labs, has made in his business. Also included is information about the Water Department's new CIMIS weather station, which helps reduce water waste by enabling growers to determine just how much water specific crops need. "Frugal Faucet" returns with his pointed water conservation humor and we continue our Water Tips section to aid you in your personal water saving endeavors. New to this issue is a Letter to the Editor section and a Water Puzzle for kids. We encourage you to let us know what you think about "WaterWays" and share the newsletter with a youngster.

We thank you for continuing to conserve water. We know it isn't easy.

Sincerely,
John Mullane
General Manager

LETTER TO THE EDITOR

Dear WaterWays:

Today I found one of your little pamphlets called "WaterWays" on the bus. I have a question I hope some one will answer for me. When I go to do the dishes the water is cold, then it finally starts coming out hot. So what I am wondering is: am I supposed to do the dishes in cold or hardly lukewarm water or let it run (which means wasting water) until it comes out hot? The same deal applies to washing my hair.

Diana Richman

Dear Diana Richman,

No, you don't have to do your dishes or wash your hair in cold water. When you run the water to let it get hot, simply place a pot beneath the faucet to catch the water until it warms up. You can then use the cold water you have collected to water plants, cook, or as drinking water. Remember not to let the water run when you do the dishes. Fill the sink and then wash your dishes. *–Ed.*

TEST YOUR WATER I.Q.

1. Your automatic washing machine uses:
   a. 10 to 15 gallons
   b. 30 to 35 gallons
   c. 50 to 55 gallons

2. A leaky toilet may be wasting more than:
   a. 100 gallons a day
   b. 20 gallons a day
   c. five gallons a day

Answers: 1.b. 2.a.

KIDS QUIZ

How much of your body is water? Two-thirds or 65% of you is water! If you take your weight and multiply by two, then divide by three, you will know how much of you is water.

Question: How much water is in a basketball team of five 70-pound Sixth Graders? Remember, with water: "A pint is a pound the world around," one quart is two pounds and a gallon is eight pounds. Phone your answer to Kim Kinna at 923-2473 and she will send you a free water conservation calendar. The answer will appear in the next "WaterWays."

WATER TIPS

Don't Use Your Toilet As An Ashtray or Wastebasket. Every time you flush a cigarette butt, facial tissue or other small bit of trash down the toilet, you waste five to seven gallons of water.

Check Faucets and Pipes for Leaks.
Even the smallest drip from a worn washer can waste 50 or more gallons of water a day. Larger leaks can waste hundreds.

Use a Broom to Clean Driveways, Sidewalks and Steps.
Using a hose to push around a few leaves and scraps of paper can waste many gallons of drinking water and is against the mandatory rationing rules now in effect.

FRUGAL FAUCET by Phil Frank with thanks to the San Francisco Chronicle

WATER AWARENESS POSTER WINNERS

Congratulations to this year's water-awareness poster winners. The following student artists were chosen for their creative designs for the "Use Water Wisely — It's a Way of Life" poster. A selection of 12 of the winning drawings will be made into a 1996 SFWD calendar. The winners received their awards at a ceremony held at the Randall Junior Museum on May 17th. The drawings are on display at the Randall Museum through May 20th.

First-Place Winners, who were awarded $100: Justine Higueros, Brendan School; Grant Lim, Sherman Elementary; Gordon Li, St. Monica's School; Cynthia Tam, Lawton Alternative School; Kwok Leung, Nam Kue School; Devin Kelly-Snead, West Portal School. **Second-Place Winners, who were awarded $75**: Greg Kielan, St. Elizabeth's School; Stephanie Chan, Lawton Alternative Elementary; Christian Lee, West Portal Lutheran School; Jillian Alexander, Glen Park School; Bram Whillock, St. Gabriel's School; Nancy Pham, Roosevelt Middle School. **Third-Place Winners, who were awarded $50:** Czarina Lee, St. Brigid's School; Dimitri Dusheyko, Lawton Alternative Elementary; Boris Brajnikoff, San Francisco Adventist Junior Academy; Vivian Yip, George Peabody School; Karen To, St. Gabriel's School; Igor Tanas, Presidio Middle School. **Honorable Mention** went to Dayton Wong, St. Brigid's School; Melanie Chang, West Portal School, and Wileen Pagaduan, St. Thomas More School. **Special prizes** went to Jessica Leung, Ulloa School and Summer Latouf, Sherman Elementary.

Using Water –

Calculate it for yourself and see how much you use every day: multiply gallons per use by times per day for total water consumption.

	Gallons Per Use	Times Per Day	Total
Taking a Bath	36		
Taking a Shower	25		
Flushing a Toilet	3.5		
Washing Hands	2		
Getting a Drink	2		
Brushing Teeth	3		
Washing Clothes	50		
Watering Outside	30		
Using Dishwasher	30		
Washing Dishes by Hand	25		
Other			

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David Paw, Gina Matawaran

SAN FRANCISCO WATER DEPARTMENT
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VOLUME 3, NUMBER 3 SPRING 1995

WATER CUSTOMERS – YOU'RE THE BEST!

San Francisco water customers have definitely been bitten by the water conservation bug and saving money may have had a little something to do with it!

In response to retrofitting ordinances passed by the Board of Supervisors in 1991, which encouraged property owners to install water conservation devices in their buildings, a whopping 87% of San Francisco's water customers filed affidavits of compliance with the San Francisco Water Department (SFWD). Those customers have been able to keep their water bills at $1.17 per unit of water used (748 gallons) versus the new higher rate of $1.75 per unit of water used for non-compliers.

SFWD is happy to announce that in 1994, San Franciscans used 6 million gallons a day less than in 1993. Thanks to all who filed affidavits and contributed to San Francisco's ongoing water conservation efforts.

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WANT TO SAVE WATER?

Look on the back of this brochure to find a chart that can help you determine how much water you use each day —

DEAR WATER USER

When it rains, it pours! And this year, it did. Nevertheless, summer will soon be upon us and the green hills we have become so accustomed to will, in no time, turn their customary summer brown – unless, of course, meteorological forces have more surprises in store for us!

Because we've had so much rain, there may be a tendency to think that we can use just as much water as we want. After all, the reservoirs are full and the snow pack hasn't even melted yet. In fact, some ski resorts say they'll stay open through July 4th. If you personally have had such thoughts, just say these words: "How soon we forget!" Then jog your conscience with the memory of what it was like to have six years of drought in San Francisco.

It's true we have plenty of water right now. But if the drought did anything for us, it taught us to think about the impacts of wasting water, to adopt a different consciousness about water use and to learn new water habits. A wet winter should not induce us to dull that consciousness or revert to old habits. Please keep the water conservation ethic alive and continue to use water wisely over the dry summer months. May is National Water Awareness Month but there's no harm in carrying it over to June, July, and August, and I'd like it if you did.

John Mullane
General Manager

EMERGENCY WATER ADVICE

Living in earthquake country, it's important to be aware of what to do water-wise if a major disaster occurs.

- Know where your main water shut-off valve is. Most shut-off valves are located in the basement, garage, near the meter box, where the main pipe enters the house, outside near the front faucet or at the vertical water pipe in front of a house.
- Secure your water heater by strapping it to wall studs with plumbers tape.
- Store 3 gallons of water per person for drinking and minimal hygiene requirements for a 72-hour period.

For more information, contact the Mayor's Office of Emergency Services at (415) 558-2700.

TIPS FOR WATERING

Summer is almost here and with it comes San Francisco's customary dry period. Gardeners who have benefitted from this year's rain will certainly want to keep their gardens green this summer. However, in order to conserve water while continuing to make your garden thrive, remember the following tips:

- Only water in the cool part of the day, either in the early morning or evening. Make sure your hose is not leaking at connection points to sprinklers and sprayers.
- Do not allow water to runoff or pool in your garden area. Only use enough water for sufficient irrigation of your plants.
- Try to use plants that do not require lots of water.
- Whenever possible use raised beds, which absorb more water and allow for drainage.

FRUGAL FAUCET by Phil Frank with thanks to the San Francisco Chronicle.